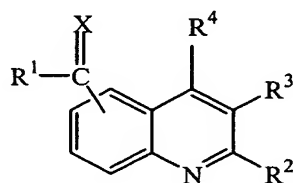


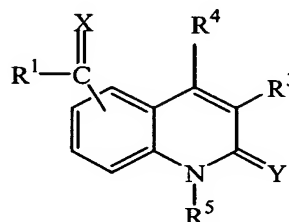
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A radiolabelled compound according to Formula (I-A)* or (I-B)*



(I-A)*

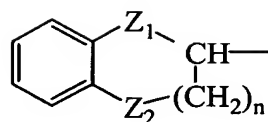


(I-B)*

an *N*-oxide form, a pharmaceutically acceptable addition salt, a quaternary amine and a stereochemically isomeric form thereof, wherein

X represents O; C(R⁶)₂ with R⁶ being hydrogen, aryl or C₁₋₆alkyl optionally substituted with amino or mono- or di(C₁₋₆alkyl)amino; S or N-R⁷ with R⁷ being amino or hydroxy;

R¹ represents C₁₋₆alkyl; aryl; thienyl; quinoliny; cycloC₃₋₁₂alkyl or (cycloC₃₋₁₂alkyl)C₁₋₆alkyl, wherein the cycloC₃₋₁₂alkyl moiety optionally may contain a double bond and wherein one carbon atom in the cycloC₃₋₁₂alkyl moiety may be replaced by an oxygen atom or an NR⁸-moiety with R⁸ being hydrogen, benzyl or C₁₋₆alkyloxycarbonyl; wherein one or more hydrogen atoms in a C₁₋₆alkyl-moiety or in a cycloC₃₋₁₂alkyl-moiety optionally may be replaced by C₁₋₆alkyl, hydroxyC₁₋₆alkyl, haloC₁₋₆alkyl, aminoC₁₋₆alkyl, hydroxy, C₁₋₆alkyloxy, arylC₁₋₆alkyloxy, halo, C₁₋₆alkyloxycarbonyl, aryl, amino, mono- or di(C₁₋₆alkyl)amino, C₁₋₆alkyloxycarbonylamino, halo, piperazinyl, pyridinyl, morpholinyl, thienyl or a bivalent radical of formula -O-, -O-CH₂-O or -O-CH₂-CH₂-O-; or a radical of formula (a-1)



a-1

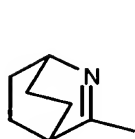
wherein Z_1 is a single covalent bond, O, NH or CH_2 ;

Z_2 is a single covalent bond, O, NH or CH_2 ;

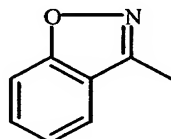
n is an integer of 0, 1, 2 or 3;

and wherein each hydrogen atom in the phenyl ring independently may optionally be replaced by halo, hydroxy, C_{1-6} alkyl, C_{1-6} alkyloxy or hydroxy C_{1-6} alkyl;

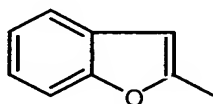
or X and R^1 may be taken together with the carbon atom to which X and R^1 are attached to form a radical of formula (b-1), (b-2) or (b-3);



b-1



b-2



b-3

R^2 represents hydrogen; halo; cyano; C_{1-6} alkyl; C_{1-6} alkyloxy; C_{1-6} alkylthio; C_{1-6} alkylcarbonyl; C_{1-6} alkyloxycarbonyl; C_{1-6} alkylcarbonyloxy C_{1-6} alkyl; C_{2-6} alkenyl; hydroxy C_{2-6} alkenyl; C_{2-6} alkynyl; hydroxy C_{2-6} alkynyl; tri(C_{1-6} alkyl)silane C_{2-6} alkynyl; amino; mono- or di(C_{1-6} alkyl)amino; mono- or di(C_{1-6} alkyloxy C_{1-6} alkyl)amino; mono- or di(C_{1-6} alkylthio C_{1-6} alkyl)amino; aryl; aryl C_{1-6} alkyl; aryl C_{2-6} alkynyl; C_{1-6} alkyloxy C_{1-6} alkylamino C_{1-6} alkyl; aminocarbonyl optionally substituted with C_{1-6} alkyl, C_{1-6} alkyloxy C_{1-6} alkyl, C_{1-6} alkyloxycarbonyl C_{1-6} alkyl or pyridinyl C_{1-6} alkyl; a heterocycle selected from thienyl, furanyl, pyrrolyl, thiazolyl, oxazolyl, imidazolyl, isothiazolyl, isoxazolyl, pyrazolyl, pyridyl, pyrazinyl, pyridazinyl, pyrimidinyl, piperidinyl and piperazinyl, optionally N-substituted with C_{1-6} alkyloxy C_{1-6} alkyl, morpholinyl, thiomorpholinyl, dioxanyl or dithianyl; a radical $-\text{NH}-\text{C}(=\text{O})\text{R}^9$ wherein R^9 represents

C₁₋₆alkyl optionally substituted with cycloC₃₋₁₂alkyl, C₁₋₆alkyloxy, C₁₋₆alkyloxycarbonyl, aryl, aryloxy, thienyl, pyridinyl, mono- or di(C₁₋₆alkyl)amino, C₁₋₆alkylthio, benzylthio, pyridinylthio or pyrimidinylthio; cycloC₃₋₁₂alkyl; cyclohexenyl; amino; arylcycloC₃₋₁₂alkylamino; mono-or-di(C₁₋₆alkyl)amino; mono- or di(C₁₋₆alkyloxycarbonylC₁₋₆alkyl)amino; mono- or di(C₁₋₆alkyloxycarbonyl)amino; mono-or di(C₂₋₆alkenyl)amino; mono- or di(arylC₁₋₆alkyl)amino; mono- or diarylamino; arylC₂₋₆alkenyl; furanylC₂₋₆alkenyl; piperididynyl; piperazinyl; indolyl; furyl; benzofuryl; tetrahydrofuryl; indenyl; adamantyl; pyridinyl; pyrazinyl; aryl; arylC₁₋₆alkylthio or a radical of formula (a-1) ;

a sulfonamid -NH-SO₂-R¹⁰ wherein R¹⁰ represents C₁₋₆alkyl, mono- or poly haloC₁₋₆alkyl, arylC₁₋₆alkyl, arylC₂₋₆alkenyl, aryl, quinolinyl, isoxazolyl or di(C₁₋₆alkyl)amino;

R³ and R⁴ each independently represent hydrogen; halo; hydroxy; cyano; C₁₋₆alkyl; C₁₋₆alkyloxy; C₁₋₆alkyloxyC₁₋₆alkyl; C₁₋₆alkylcarbonyl; C₁₋₆alkyloxycarbonyl; C₂₋₆alkenyl; hydroxyC₂₋₆alkenyl; C₂₋₆alkynyl; hydroxyC₂₋₆alkynyl; tri(C₁₋₆alkyl)silaneC₂₋₆alkynyl; amino; mono- or di(C₁₋₆alkyl)amino; mono- or di(C₁₋₆alkyloxyC₁₋₆alkyl)amino; mono- or di(C₁₋₆alkylthioC₁₋₆alkyl)amino; aryl; morpholinylC₁₋₆alkyl or piperidinylC₁₋₆alkyl ; or

R² and R³ may be taken together to form -R²-R³-, which represents a bivalent radical of formula -(CH₂)₃-, -(CH₂)₄-, -(CH₂)₅-, -(CH₂)₆-, -CH=CH-CH=CH-, -Z₄-CH=CH-, -CH=CH-Z₄-, -Z₄-CH₂-CH₂-CH₂-, -CH₂-Z₄-CH₂-CH₂-, -CH₂-CH₂-Z₄-CH₂-, -CH₂-CH₂-CH₂-Z₄-, -Z₄-CH₂-CH₂-, -CH₂-Z₄-CH₂- or -CH₂-CH₂-Z₄-, with Z₄ being O, S, SO₂ or NR¹¹ wherein R¹¹ is hydrogen, C₁₋₆alkyl, benzyl or C₁₋₆alkyloxycarbonyl; and wherein each bivalent radical is optionally substituted with C₁₋₆alkyl.

or R³ and R⁴ may be taken together to form a bivalent radical of formula -CH=CH-CH=CH- or -CH₂-CH₂-CH₂-CH₂- ;

R⁵ represents hydrogen; cycloC₃₋₁₂alkyl; piperidinyl; oxo-thienyl; tetrahydrothienyl, arylC₁₋₆alkyl; C₁₋₆alkyloxyC₁₋₆alkyl; C₁₋₆alkyloxycarbonylC₁₋₆alkyl or C₁₋₆alkyl optionally substituted with a radical C(=O)NR_xR_y, in which R_x and R_y, each independently are hydrogen, cycloC₃₋₁₂alkyl, C₂₋₆alkynyl or C₁₋₆alkyl optionally

substituted with cyano, C₁₋₆alkyloxy, C₁₋₆alkyloxycarbonyl, furanyl, pyrrolidinyl, benzylthio, pyridinyl, pyrrolyl or thienyl;

Y represents O or S;

or Y and R⁵ may be taken together to form =Y-R⁵- which represents a radical of formula

-CH=N-N= (c-1);

-N=N-N= (c-2); or

-N-CH=CH- (c-3);

aryl represents phenyl or naphthyl optionally substituted with one or more substituents selected from halo, hydroxy, C₁₋₆alkyl, C₁₋₆alkyloxy, phenyloxy, nitro, amino, thio, C₁₋₆alkylthio, haloC₁₋₆alkyl, polyhaloC₁₋₆alkyl, polyhaloC₁₋₆alkyloxy, hydroxyC₁₋₆alkyl, C₁₋₆alkyloxyC₁₋₆alkyl, aminoC₁₋₆alkyl, mono-or di(C₁₋₆alkyl)amino; mono-or di(C₁₋₆alkyl)aminoC₁₋₆alkyl, cyano, -CO-R¹², -CO-OR¹³, -NR¹³SO₂R¹², -SO₂-NR¹³R¹⁴, -NR¹³C(O)R¹², -C(O)NR¹³R¹⁴, -SOR¹², -SO₂R¹²; wherein each R¹², R¹³ and R¹⁴ independently represent C₁₋₆alkyl; cycloC₃₋₆alkyl; phenyl; phenyl substituted with halo, hydroxy, C₁₋₆alkyl, C₁₋₆alkyloxy, haloC₁₋₆alkyl, polyhaloC₁₋₆alkyl, furanyl, thienyl, pyrrolyl, imidazolyl, thiazolyl or oxazolyl;

and when the R¹-C(=X) moiety is linked to another position than the 7 or 8 position, then said 7 and 8 position may be substituted with R¹⁵ and R¹⁶ wherein either one or both of R¹⁵ and R¹⁶ represents C₁₋₆alkyl, C₁₋₆alkyloxy or R¹⁵ and R¹⁶ taken together may form a bivalent radical of formula -CH=CH-CH=CH-.

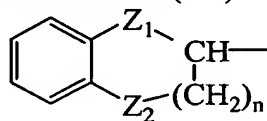
2. (Currently Amended) A radiolabelled compound according to claim 1, wherein characterized in that,

X represents O; C(R⁶)₂ with R⁶ being hydrogen or aryl ; or N-R⁷ with R⁷ being amino or hydroxy;

R¹ represents C₁₋₆alkyl, aryl; thienyl; quinoliny; cycloC₃₋₁₂alkyl or (cycloC₃₋₁₂alkyl)C₁₋₆alkyl, wherein the cycloC₃₋₁₂alkyl moiety optionally may contain a double bond and wherein one carbon atom in the cycloC₃₋₁₂alkyl moiety may be replaced by an oxygen atom or an NR⁸-moiety with R⁸ being benzyl or C₁₋₆alkyloxycarbonyl ; wherein one or more hydrogen atoms in a C₁₋₆alkyl-moiety or in a cycloC₃₋₁₂alkyl-moiety optionally may be replaced by C₁₋₆alkyl, haloC₁₋₆alkyl, hydroxy, C₁₋₆alkyloxy, arylC₁₋₆alkyloxy, halo, aryl, mono- or di(C₁₋₆alkyl)amino, C₁₋₆alkyloxycarbonylamino,

halo, piperazinyl, pyridinyl, morpholinyl, thienyl or a bivalent radical of formula $-O-$ or $-O-CH_2-CH_2-O-$;

or a radical of formula (a-1)



a-1

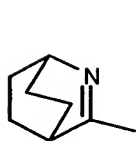
wherein Z_1 is a single covalent bond, O or CH_2 ;

Z_2 is a single covalent bond, O or CH_2 ;

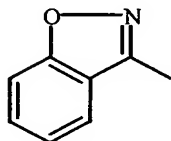
n is an integer of 0, 1, or 2 ;

and wherein each hydrogen atom in the phenyl ring independently may optionally be replaced by halo or hydroxy;

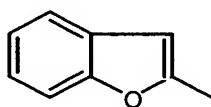
or X and R^1 may be taken together with the carbon atom to which X and R^1 are attached to form a radical of formula (b-1), (b-2) or (b-3);



b-1



b-2



b-3

R^2 represents hydrogen; halo; cyano; C_{1-6} alkyl; C_{1-6} alkyloxy; C_{1-6} alkylthio; C_{1-6} alkylcarbonyl; C_{1-6} alkyloxycarbonyl; C_{2-6} alkenyl; hydroxy C_{2-6} alkenyl; C_{2-6} alkynyl; hydroxy C_{2-6} alkynyl; tri(C_{1-6} alkyl)silane C_{2-6} alkynyl; amino; mono- or di(C_{1-6} alkyl)amino; mono- or di(C_{1-6} alkyloxy C_{1-6} alkyl)amino; mono- or di(C_{1-6} alkylthio C_{1-6} alkyl)amino; aryl; aryl C_{1-6} alkyl; aryl C_{2-6} alkynyl; C_{1-6} alkyloxy C_{1-6} alkylamino C_{1-6} alkyl; aminocarbonyl optionally substituted with C_{1-6} alkyloxycarbonyl C_{1-6} alkyl ; a heterocycle selected from thienyl, furanyl, thiazolyl and piperidinyl, optionally N-substituted with morpholinyl or thiomorpholinyl; a radical $-NH-C(=O)R^9$ wherein R^9 represents C_{1-6} alkyl optionally substituted with cyclo C_{3-12} alkyl, C_{1-6} alkyloxy, C_{1-6} alkyloxycarbonyl, aryl, aryloxy, thienyl, pyridinyl, mono- or di(C_{1-6} alkyl)amino, C_{1-6} alkylthio, benzylthio, pyridinylthio or pyrimidinylthio; cyclo C_{3-12} alkyl; cyclohexenyl; amino; arylcyclo C_{3-12} alkylamino;

mono-or-di(C₁₋₆alkyl)amino; mono- or di(C₁₋₆alkyloxycarbonylC₁₋₆alkyl)amino; mono- or di(C₁₋₆alkyloxycarbonyl)amino; mono-or di(C₂₋₆alkenyl)amino; mono- or di(arylC₁₋₆alkyl)amino; mono- or diarylamino; arylC₂₋₆alkenyl; furanylC₂₋₆alkenyl; piperididiny; piperazinyl; indolyl; furyl; benzofuryl; tetrahydrofuryl; indenyl; adamantyl; pyridinyl; pyrazinyl; aryl or a radical of formula (a-1) ; a sulfonamid -NH-SO₂-R¹⁰ wherein R¹⁰ represents C₁₋₆alkyl, mono- or poly haloC₁₋₆alkyl, arylC₁₋₆alkyl or aryl;

R³ and R⁴ each independently represent hydrogen; C₁₋₆alkyl; C₁₋₆alkyloxyC₁₋₆alkyl; C₁₋₆alkyloxycarbonyl; or

R² and R³ may be taken together to form -R²-R³-, which represents a bivalent radical of formula -(CH₂)₄-, -(CH₂)₅-, -Z₄-CH=CH-, -Z₄-CH₂-CH₂-CH₂- or -Z₄-CH₂-CH₂-, with Z₄ being O, S, SO₂ or NR¹¹ wherein R¹¹ is hydrogen, C₁₋₆alkyl, benzyl or C₁₋₆alkyloxycarbonyl; and wherein each bivalent radical is optionally substituted with C₁₋₆alkyl;

or R³ and R⁴ may be taken together to form a bivalent radical of formula -CH=CH-CH=CH- or -CH₂-CH₂-CH₂-CH₂- ;

R⁵ represents hydrogen; piperidinyl; oxo-thienyl; tetrahydrothienyl, arylC₁₋₆alkyl; C₁₋₆alkyloxycarbonylC₁₋₆alkyl or C₁₋₆alkyl optionally substituted with a radical C(=O)NR_xR_y, in which R_x and R_y, each independently are hydrogen, cycloC₃₋₁₂alkyl, C₂₋₆alkynyl or C₁₋₆alkyl optionally substituted with cyano, C₁₋₆alkyloxy or C₁₋₆alkyloxycarbonyl;

Y represents O or S;

or Y and R⁵ may be taken together to form =Y-R⁵- which represents a radical of formula

-CH=N-N= (c-1); or

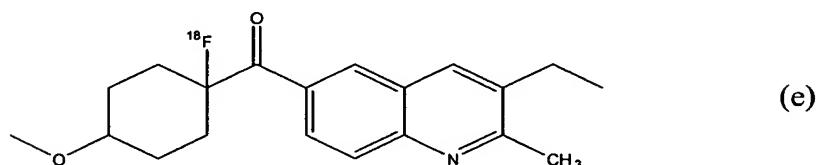
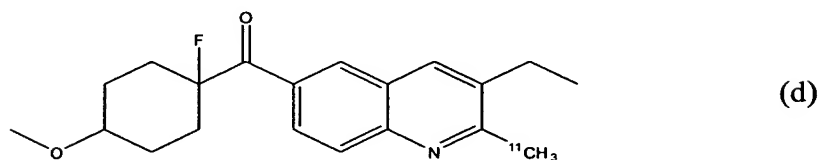
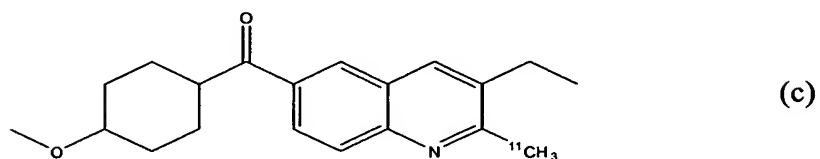
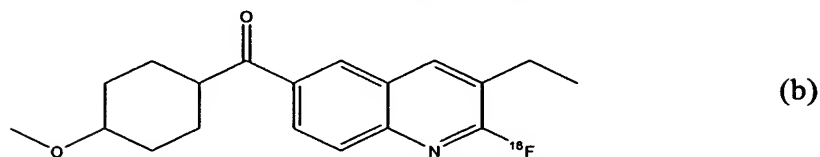
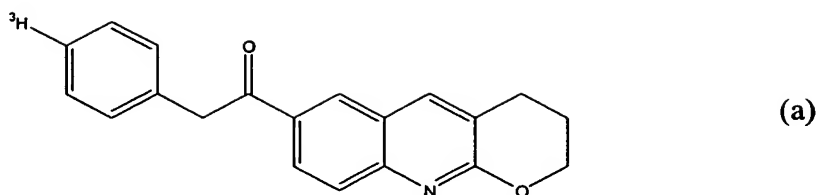
-N=N-N= (c-2);

aryl represents phenyl or naphthyl optionally substituted with one or more substituents selected from halo, C₁₋₆alkyloxy, phenyloxy, mono-or di(C₁₋₆alkyl)amino and cyano; and when the R¹-C(=X) moiety is linked to another position than the 7 or 8 position, then said 7 and 8 position may be substituted with R¹⁵ and R¹⁶ wherein either one or both of R¹⁵ and R¹⁶ represents C₁₋₆alkyl or R¹⁵ and R¹⁶ taken together may form a bivalent radical of formula -CH=CH-CH=CH-.

3. (Currently Amended) A radiolabelled compound according to claim 1, wherein, any one of claims 1—2, characterized in that,

- X represents O;
- R¹ represents C₁₋₆alkyl; cycloC₃₋₁₂alkyl or (cycloC₃₋₁₂alkyl)C₁₋₆alkyl, wherein one or more hydrogen atoms in a C₁₋₆alkyl-moiety or in a cycloC₃₋₁₂alkyl-moiety optionally may be replaced by C₁₋₆alkyloxy, aryl, halo or thienyl;
- R² represents hydrogen; halo; C₁₋₆alkyl or amino;
- R³ and R⁴ each independently represent hydrogen or C₁₋₆alkyl; or
- R² and R³ may be taken together to form -R²-R³-, which represents a bivalent radical of formula -Z₄-CH₂-CH₂-CH₂- or -Z₄-CH₂-CH₂- with Z₄ being O or NR¹¹ wherein R¹¹ is C₁₋₆alkyl; and wherein each bivalent radical is optionally substituted with C₁₋₆alkyl;
- or R³ and R⁴ may be taken together to form a bivalent radical of formula -CH₂.CH₂-CH₂-CH₂- ;
- R⁵ represents hydrogen;
- Y represents O; and
- aryl represents phenyl optionally substituted with halo.

4. (Currently Amended) A radiolabelled compound according to claim 1, wherein, any one of claims 1-3, characterized in that the R¹-C(=X) moiety is linked to the quinoline or quinolinone moiety in position 6.
5. (Currently Amended) A radiolabelled compound according to claim 1, wherein any one of claims 1-4, characterized in that the compound contains at least one radioactive atom.
6. (Currently Amended) A radiolabelled compound according to claim 5, wherein ~~characterized in that~~ the radioactive isotope is selected from the group of ~~of~~ ³H, ¹¹C and ¹⁸F.
7. (Currently Amended) A radiolabelled compound according to claim 6, wherein ~~characterized in that~~ the compound is any one of compounds (a), (b), (c), (d) and (e) :



8. (Currently Amended) A radiolabelled compound according to claim 6, wherein, ~~characterized in that~~ the compound is compound (a).
9. (Currently Amended) Radioactive composition for the administration to mammals comprising a therapeutically effective amount of a radiolabelled compound according to claim 1 ~~any of claims 1-8~~ and a pharmaceutically acceptable carrier or diluent.
10. (Currently Amended) A radiolabelled compound according to claim 1 ~~any one of claims 1-8 or a composition according to claim 9~~ for use in a diagnostic method.
11. (Currently Amended) A radiolabelled compound according to claim 1, wherein ~~any one of claims 1-8 or a composition according to claim 9, characterized in that the~~

diagnostic method consists of marking or identifying a mGlu1 receptor in biological material.

12. (Currently Amended) A radiolabelled compound according to claim 1, ~~wherein any one of claims 1-8 or a composition according to claim 9, characterized in that~~ the marking consists of administering the radiolabelled compound to biological material and the identifying consists of detecting the emissions from the radiolabelled compound.
13. (Currently Amended) A radiolabelled compound according to claim 1, ~~wherein any one of claims 1-8 or a composition according to claim 9, characterized in that~~ the diagnostic method consists of screening whether a test compound has the ability to occupy or bind to a mGlu1 receptor in biological material.
14. (Currently Amended) A radiolabelled compound or composition according to claim 1, ~~wherein any one of claims 11-13, characterized in that~~ the biological material is selected from the group of tissue samples, plasma fluids, body fluids, body parts and organs originating from warm-blooded animals and warm-blooded animals *per se*, in particular humans.
15. (Currently Amended) A radiolabelled compound according to claim 1 ~~any one of claims 1-8 or a composition according to claim 9~~ for the manufacture of a diagnostic tool for marking or identifying an mGlu1 receptor in biological material.
16. (Currently Amended) Use of a radiolabelled compound or composition according to claim 15, wherein ~~characterized in that~~ the marking consists of administering the radiolabelled compound to biological material and the identifying consists of detecting the emissions from the radiolabelled compound.
17. (Currently Amended) A radiolabelled compound according to claim 1 ~~any one of claims 1-8 or a composition according to claim 9~~ for the manufacture of a diagnostic tool for screening whether a test compound has the ability to occupy or bind to a mGlu1 receptor in biological material